AZD 009 015 389
Att A XX-2

GROUNDWATER

US EPA Region 9 GPRA Environmental Indicator Signature Page
RCRA Corrective Action Assessment of CA750
(Migration of Contaminated Groundwater Under Control)

Facility Name	**Romic Environmental Technologies Corp. (Romic SW)**
Facility Address	**6760 West Allison Rd., Chandler, AZ 85226 (Gila River Indian Community)**
U.S. EPA ID#	**AZD 009 015 389**

Environmental indicators (EI) are site-wide determinations, based on the remedial work overseen by all agencies. There will be one overall determination for the EI, which considers the portions overseen by each agency. The final determinations for the EI will be NO or IN, if any portion of the site is IN or NO. To get an overall YES determination, all portions of the site must have YES determinations for the EI.

Migration of Contaminated Groundwater Under Control	**Groundwater EI determination for remedial activities overseen by:**
☒ YES ☐ NO ☐ IN	☒ USEPA Region 9 ☐ California Department of Toxic Substances Control (DTSC) ☐ California Regional Water Quality Control Board ☐ DTSC Site Mitigation & Brownfields Reuse Program ☐ Arizona Department of Environmental Quality ☐ Nevada Department of Environmental Protection

I (we) agree that the factual information I (we) have provided concerning the remedial activities overseen at this facility by the lead regulatory agency identified above, as the basis for this EI assessment, is, to the best of my (our) knowledge, accurate.

Completed by:

Name(s) (print)	**Agency**	**Signature**
John R. Moody	US EPA	John R Moody (9/25/14)

Supervisor:

Name (print)	**Title**	**Signature**
Steve Armann	Corrective Action Manager	9/25/24

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/7/07

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name:	*Romic Environmental Technologies Corp. (Romic SW)*
Facility Address:	*6760 West Allison Rd. Chandler, AZ 85226 (Gila River Indian Community)*
Facility EPA ID #:	*AZD 009 015 389*

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

X If yes - check here and continue with #2 below.

____ If no - re-evaluate existing data, or

____ If data are not available skip to #6 and enter"IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

X If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

____ If unknown - skip to #8 and enter "IN" status code.

Rationale:

Two Chemicals of Concern are associated with this site and it's associated plume; TCE and PCE. (MCLs are 5 µ/L)

The current (2013) highest levels of groundwater contamination at the site are:

TCE 16 µ/L (down from 250 µ/L)
PCE 14 µ/L (down from 280 µ/L)

The current (2013) highest levels of groundwater contamination associated with the plume are:

TCE 22 µ/L (down from 130 µ/L)
PCE 42 µ/L (down from 106 µ/L)

References

Romic generated reports:

Clear Creek Associates, 2007b
LFR 2009
Clear Creek Associates 2009
ARCADIS 2011
Clear Creek Associates 2014

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

X If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

____ If unknown - skip to #8 and enter "IN" status code.

Rationale:

Prior Soil and Soil Gas remediation has significantly reduced the source area contamination and has significantly affected the plume concentration levels. Recent sampling indicates that the plume is diminishing in both extent and concentration. Additionally, projected ISCO treatment in FY 2015 at the site should further reduce the source area and plume concentration levels (see # 2 above for concentration reduction levels.

References

Romic generated reports:

Clear Creek Associates, 2007b
LFR 2009
Clear Creek Associates 2009
ARCADIS 2011
Clear Creek Associates 2014

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

____ If yes - continue after identifying potentially affected surface water bodies.

X If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

____ If unknown - skip to #8 and enter "IN" status code.

Rationale:

References

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

____ If unknown - enter "IN" status code in #8.

Rationale:

References

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

____ If unknown - skip to 8 and enter "IN" status code.

Rationale:

References

[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

____ If no - enter "NO" status code in #8.

X If unknown - enter "IN" status code in #8.

Rationale:

We are currently reviewing draft RFI and CMS Reports upon which we will make a final decision for future corrective measures and monitoring. The current CMS recommends ISCO and monitored natural attenuation.

References

2014 Draft Romic RFI & CMS Reports.

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

X	YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI Determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the ***(fill in the blank)*** facility, EPA ID # ***(fill in the blank)*** , located at ***(fill in the blank)***. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater." This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.
	NO - Unacceptable migration of contaminated ground water is observed or expected.
	IN - More information is needed to make a determination.

Completed by	(signature)	(see attached signature page)	Date	
John R. Moody	(print)	John R Moody		Sept. 25, 2014
Romic Project Manager	(title)			

Supervisor	(signature)	(see attached signature page)	Date	
Steve Armann	(print)			9/25/14
Corrective Action Section	(title)			
	(EPA Region or State)			

Locations where References may be found:
US EPA Region 9, Land Management Division, Corrective Action Office

Contact telephone and e-mail numbers

(name)	*John R. Moody*
(phone #)	*(415) 972-3346*
(e-mail)	*Moody.john@epa.gov*